

Section 2-7: Proving Segment Relationships

By the end of this lesson, you should be able to answer:

- How do you write proofs involving segment addition?
- How do you write proofs involving segment congruence?

Some new postulates and Theorems:

- Ruler Postulate
- Segment Addition Postulate
- Theorem 2.2 - Properties of Segment Congruence
 - Reflexive Property of Congruence
 - Symmetric Property of Congruence
 - Transitive Property of Congruence

Example 1: Prove that if $\overline{AB} \cong \overline{CD}$, then $\overline{AC} \cong \overline{BD}$.



Proof: The Transitive Property of Congruence

Example 2: Matt Mitarnowski is designing a badge for his club. The length of the top edge of the badge is equal to the length of the left edge of the badge. The top edge of the badge is congruent to the right edge of the badge, and the right edge of the badge is congruent to the bottom edge of the badge. Prove that the bottom edge of the badge is congruent to the left edge of the badge.

Problem Set:

"TRUST YOURSELF. THINK FOR YOURSELF. ACT FOR YOURSELF. SPEAK FOR YOURSELF. BE YOURSELF. IMITATION IS SUICIDE." - MARVA COLLINS